

WHAT IS CLAIMED IS:

1. An automatic speech recognition system, comprising:
 2. a memory that stores data related to at least one of a communication device, transducer, vocal information and acoustic environmental data;
 4. a controller coupled with the memory that determines the data of the at least one communications device, transducer, vocal information and acoustic environmental data, and then compensates at least one speech recognition model to reflect the data; and
 8. a speech recognizer that recognizes speech utterances by using the at least one compensated speech recognition model.
10. 2. The automatic speech recognition system according to claim 1, wherein the transducer data includes a distortion value related to a transducer of a mobile communications device.
13. 3. The automatic speech recognition system according to claim 1, wherein the acoustic environmental data includes a background noise value that corresponds to an operating environment of a mobile communications device.
16. 4. The automatic speech recognition system according to claim 1, wherein the vocal information includes a distortion value related to an end user associated with a mobile communications device.
1. 5. The automatic speech recognition system according to claim 1, wherein a personal computer is used provide the data of the at least one communications device, transducer, vocal information and acoustic environmental data.
1. 6. The automatic speech recognition system according to claim 1, wherein a personal digital assistant is used to provide the data of the at least one communications device, transducer, vocal information and acoustic environmental data.
1. 7. The automatic speech recognition system according to claim 1, wherein the data of the at least one communications device, transducer, vocal information and acoustic environmental data is provided through a satellite communications system.
1. 8. The automatic speech recognition system according to claim 1, wherein the speech recognizer is a network server using a hidden Markov model.

1 9. The automatic speech recognition system according to claim 1, wherein
2 the controller is a network server that includes a pronunciation circuit, an environment-
3 transducer-speaker circuit and a feature space circuit.

1 10. The automatic speech recognition system according to claim 8, wherein
2 the network server updates the at least one speech recognition model and a pronunciation
3 model to reflect a specific type of communications device.

4 11. The automatic speech recognition system according to claim 1, wherein
5 the memory further stores personal account information that includes administrative
6 information relating to an end user, and a probability value that represents a probability
7 of the end user being in a particular background environment.

8 12. The automatic speech recognition system according to claim 1, wherein
9 the communications device can be configured by an end user to select a specific speech
10 recognition network.

1 13. A controller used in an automatic speech recognition system, comprising:
2 a first section that determines data related to at least one of a
3 communication device, transducer, vocal information and acoustic environmental data;
4 and

5 a second section that compensates a speech recognition model based the
6 data related to at least one of the communications device, transducer, vocal information
7 and acoustic environmental data;

1 14. The controller according to claim 13, wherein the controller identifies a
2 mobile device by a radio frequency identification tag.

1 15. The controller according to claim 13, wherein the acoustic environmental
2 data is determined using at least one microphone in an end user's environment.

1 16. The controller according to claim 13, wherein the acoustic environmental
2 data is determined using a plurality of microphones that are selectively initiated as an end
3 user walks in between the plurality of microphones.

1 17. The controller according to claim 13, wherein the transducer data is a
2 distortion value based on a difference between an actual transducer in the mobile device
3 and a response characteristic of a transducer used to train the speech recognition model.

1 18. The controller according to claim 13, wherein the vocal information
2 represents a variability that exists in vocal tract shapes among speakers of a group.

1 19. The controller according to claim 13, wherein the controller communicates
2 with a memory that stores various acoustic environmental models and various features of
3 a specific type of mobile device.

1 20. The controller according to claim 19, wherein a third section stores
2 personal account information for each end user.

1 21. A method of using an automatic speech recognition system, comprising
2 the steps of:

3 receiving speech utterances into the automatic speech recognition system;
4 determining data related to at least one of a communications device,
5 transducer, vocal information and acoustic environmental data;

6 compensating a speech recognition model based on the data related to at
7 least one of the communications device, transducer, vocal information and acoustic
8 environmental data; and

9 recognizing the speech utterances as speech data using the compensated
10 speech recognition model.

11 22. The method according to claim 21, wherein the transducer data includes a
12 distortion value related to a transducer used in a mobile device.

13 23. The method according to claim 22, wherein the data related to the acoustic
14 environmental data includes a background noise value that corresponds to an operating
15 environment of a mobile communications device.

16 24. The method according to claim 21, wherein the data of the at least one of a
17 communications device, transducer, vocal information and acoustic environmental data is
18 received from a cellular telephone.

1 25. The method according to claim 21, wherein the data of the at least one of a
2 communications device, transducer, vocal information and acoustic environmental data is
3 received from a personal digital assistant.

1 26. The method according to claim 21, wherein the data of the at least one of a
2 communications device, transducer, vocal information and acoustic environmental data is
3 received via a satellite communications system.

1 27. The method according to claim 21, wherein the speech recognition model
2 is a hidden Markov model.

1 28. The method according to claim 23, wherein determining the acoustic
2 environmental data is performed using a network server.

1 29. The method according to claim 23, wherein the acoustic environmental
2 data is determined using at least one microphone in an end user's environment.

1 30. The method according to claim 22, wherein the distortion value is
2 determined based on a difference between an actual transducer in the mobile device and a
3 response characteristic of a transducer used to train the speech recognition model.

1 31. The method according to claim 21, further comprising updating the speech
2 recognition model and a pronunciation model to reflect a specific type of mobile
3 communications device.

1 32. The method according to claim 21, further comprising configuring the
2 communications device to select a specific speech recognition network.